

Commemorating the life, achievements and impact of Rudolph E. Kalman

The purpose of this commemorative special issue in the ASME Journal for Dynamic Systems, Measurement, and Control is to celebrate the rich legacy of Professor Rudolph E. Kalman's contributions to the mathematical theory of systems and control. These contributions include his seminal 1960 paper "A new approach to linear filtering and prediction problems," which introduced the Kalman filter. This paper was published in the Journal of Basic Engineering which was renamed in 1972 to the ASME Journal for Dynamic Systems, Measurement, and Control. One of the early successes of the Kalman filter was in the navigation system of the Apollo capsule, which helped bring President Kennedy's call of "Landing a man on the moon," to fruition. During the past five decades, the Kalman filter continues to have a major impact in applications ranging from navigation and control of engineering systems (such as airplanes, satellites and cars), GPS, computer vision, structural health monitoring, econometrics, weather forecasting and many more. To celebrate Professor Kalman's seminal achievements, the ASME Journal for Dynamic Systems, Measurement, and Control, is soliciting contributions for this special commemorative issue. Given the sheer breadth of his work, a single issue will not do justice to the lasting legacy of his work. The focus of this special issue will be on theory and applications of filtering and estimation. Contributions are invited in both theory and applications: Theoretical topics of interest include linear and nonlinear filtering theory, Kalman filtering, importance sampling and particle filtering, particle flow methods, geometric approaches and nonlinear observers, filter stability, filtering in high-dimensional spaces, duality between optimal filtering and control, and estimation over networks. Applications include both classical topics such as target state estimation, navigation, GPS, structural health monitoring, as well as new and emerging applications in biology, networks, and machine learning.

Submission guidelines are as follows:

1. Corresponding authors should submit a one-page abstract to one of the Guest Editors listed below by 10/15/2016. The authors will be notified of the suitability of the proposed paper to the special issue by 10/30/2016.
2. Final submissions of the approved papers are due by the 01/15/2017 to the ASME Journal for Dynamic Systems, Measurement, and Control website (<http://journaltool.asme.org/>). The submitted papers will go through the standard review process prior to acceptance and publication.

For authors who already have a paper under review in the ASME Journal for Dynamic Systems, Measurement, and Control and would like the paper to be considered for the special issue, please send an email to one of the Guest Editors with a one-page Abstract.

Submissions of the abstract can be emailed to:

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- Puneet Singla, psingla@buffalo.edu
- Prashant Mehta, mehtapg@illinois.edu